

A1
an active layer formed on said first cladding layer;
a second cladding layer of a second conductivity type formed on said active layer; and
a saturable absorbing layer formed on at least portions of at least one of said first cladding layer and said second cladding layer,

wherein said saturable absorbing layer is formed to have a band gap energy either approximately the same as, or slightly smaller than, said active layer, and also to be doped with a high concentration of N:

A2
6. (Amended) The semiconductor device according to claim 1, wherein said semiconductor device comprises a self-pulsating semiconductor laser device.

13. (Amended) A semiconductor device comprising:

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a semiconductor substrate of a first conductivity type;
a first cladding layer of said first conductivity type formed on said semiconductor substrate;

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an active layer formed on said first cladding layer;
a second cladding layer of a second conductivity type formed on said active layer; and
a saturable absorbing layer formed on at least portions of at least one of said first cladding layer and said second cladding layer,

(wherein said saturable absorbing layer is a mixed crystal of N with another group-V element and is formed to have a band gap energy either approximately the same as, or slightly smaller than, said active layer.